

Section 717. DOWNSPOUTS AND DRAINS

717.01 Description. This work consists of furnishing and installing deck drains and downspouts, adjusting existing deck drains, extending existing downspouts, and protecting deck drain systems during construction activities.

717.02 Materials. Materials shall meet the following requirements.

Drain Castings	908
Downspouts	909
Miscellaneous Metals	908
Drain Extensions	909

717.03 Construction.

- A. **New Construction.** Install the drain castings and downspouts at the locations and elevations shown on the plans.
- B. **Adjusting Existing Deck Drains.** Adjust the existing drain castings and downspouts to the new elevations shown on the plans.
- C. **Downspout Replacement.** Fabricate the replacement downspout from polyethylene pipe with an inside diameter sized to fit the outside of the existing drain casting. Furnish a length sufficient to extend from the drain casting to approximately 6 inches below the beams, or as otherwise noted on the plans. Remove any existing downspout. Attach the replacement downspout to the existing drain casting with four equally spaced galvanized steel cap screws, drilled and tapped into the casting. Install a support bracket, as shown on the plans, when the depth of the adjacent beams is greater than 42 inches.
- D. **Deck Drain Extension.** This work includes fabricating and installing a fiberglass reinforced plastic deck drain extension selected from the Qualified Products List. The extension shall be centered beneath the existing drain opening and fastened directly to the deck as shown on the plans.
- E. **Protecting Deck Drainage Systems.** Protect any existing deck drains and downspouts when the nature of the bridge repair work has the potential to clog the deck drainage system. Provide adequate protection during all operations to prevent debris from clogging the deck drains and downspouts. The method of protection shall be approved by the Engineer.

Prior to beginning work on the bridge, the Contractor and the Engineer shall conduct an inspection of the deck drains and downspouts to ascertain their condition.

717.04 Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Drain Casting, Type —	Each
Drain Casting Assembly, Type —	Each

Deck Drain, Adjust	Each
Downspout Replacement	Each
Deck Drain, Extension	Each

- A. **Drain Casting Assembly, Type** __ will include furnishing and installing the downspout and the lower bracket, if needed.
- B. **Deck Drain, Adjust** will include adjusting the drain casting and downspout.
- C. **Downspout Replacement** will include taking field measurements needed to determine downspout size. They will also include hardware to fasten the downspout to the drain casting and furnishing and installing the lower bracket for locations where the depth of the adjacent beam is greater than 42 inches.
- D. Protecting deck drainage systems will not be paid for separately but will be considered as having been included in the contract unit prices bid for other contract items. At the completion of the project, the deck drains and downspouts must be free and clear. If not, they shall be cleaned at the Contractor's expense.